



**MONTGOMERY COUNTY FIRE AND RESCUE SERVICE
DRIVER/OPERATOR TRAINING PROGRAM**

**EMERGENCY VEHICLE DRIVER/OPERATOR
TRAINING COMPETENCIES
ENGINE**

Candidate Name: _____ **ID#** _____ **Date:** _____

Station/Shift/Dept: _____ **Mentor:** _____

Unit #: _____ **Make:** _____ **Year:** _____

Supervisor Name: _____

I have reviewed and confirmed that all competencies are completed for this candidate:

Supervisor Signature

Date

- **Master**** Able to perform Competency 90-100% of the time without assistance.
****Proficient**** Able to perform Competency 80-90% of the time without assistance.
****Competent**** Able to perform Competency 70-80% of the time without assistance.

<i>Section</i>	<i>Performance Level</i>	<i>Competencies</i>	<i>Evaluator Initials</i>	<i>Date Completed</i>
1.0	Emergency Vehicle Pre-Response Preventative Maintenance Inspection (NFPA 1002)			
1.1	Master	Candidate will explain the process and properly perform a pre-response PM inspection, and provide adequate documentation on a checklist.		
1.2	Proficient	Candidate will successfully explain the purpose of emergency vehicle pre-response preventative maintenance inspections.		
1.3	Proficient	Candidate will successfully explain the steps to the emergency vehicle pre-response inspection process.		
1.4	Proficient	Candidate will successfully explain the safety precautions for emergency vehicle pre-response preventative maintenance inspections.		
1.5	Master	Candidate will successfully conduct a pre-response inspection on an emergency vehicle.		
1.6	Proficient	Pump Preventative Maintenance		
		a) Candidate will demonstrate proficiency in back-flushing the pump.		
		b) Candidate will successfully perform a dry prime test.		
		c) Candidate will successfully explain how to perform preventative maintenance on the pump control panel.		

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2.0	Vehicle Inspection and Driving Preparation (NFPA 1002)			
2.1	Proficient	Candidate will explain how to perform a complete emergency vehicle inspection, schedule routine maintenance, and complete required documentation.		
2.2	Competent	Candidate will successfully identify major motor vehicle components.		
2.3	Competent	Candidate will successfully explain features of an emergency vehicle pre-response preventable maintenance inspection.		
2.4	Competent	Candidate will successfully explain how to perform routine maintenance on an emergency vehicle.		
2.5	Master	Candidate will successfully explain safety checks and adjustment that should be made to prepare for emergency vehicle driving.		
2.6	Master	Candidate will demonstrate proficiency in how to start the emergency vehicle.		
2.7	Master	Candidate will successfully explain precautions to take before moving an emergency vehicle.		
2.8	Master	Candidate will successfully conduct an inspection on a piece of apparatus at the station using the model inspection checklist		
2.9	Proficient	Candidate will explain the apparatus and equipment defect reporting procedures for assigned station.		
2.10	Competent	Candidate will identify vehicle height, weight, length and width.		
3.0	Operating an Emergency Vehicle (NFPA 1002)			
3.1	Master	Candidate will be able to explain the purpose and use of emergency signaling equipment, how basic vehicle control tasks are accomplished, required urban driving skills, how to negotiate intersections, and make vehicle turnabouts.		
3.2	Master	Candidate will successfully explain the purpose of emergency vehicle signaling equipment.		
3.3	Proficient	Candidate will successfully explain basic emergency vehicle control tasks.		
3.4	Competent	Candidate will successfully explain urban emergency vehicle defensive driving skills.		
3.5	Master	Candidate will successfully explain how to safely negotiate a vehicle through intersection.		
3.6	Master	Candidate will successfully explain how to safely negotiate a vehicle operated in an emergency mode through intersections.		
3.7	Master	Candidate will successfully explain how to turn emergency vehicles around in a variety of situations.		
3.8	Master	Candidate will successfully explain the safe operating procedure for following another vehicle.		
3.9	Master	Candidate will successfully explain the safe operating procedures for passing another vehicle.		
3.10	Master	Candidate will successfully explain the safe operating procedures for expressway operations.		

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3.11	Master	Candidate will successfully explain the safe operating procedures for driving at high speeds.		
3.12	Master	Candidate will successfully explain the operation of the rear axle locks and positive traction devices.		
4.0	Handling Dangerous & Unusual Driving Situations (NFPA 1002)			
4.1	Proficient	Candidate will be able to explain methods to prevent, and when necessary, control unusual and dangerous driving situations.		
4.2	Proficient	Candidate will successfully identify proper operating procedures for driving in adverse conditions.		
4.3	Proficient	Candidate will successfully explain how to handle contingency situations when they occur.		
4.4	Proficient	Candidate will successfully explain how to handle skids.		
4.5	Proficient	Candidate will successfully explain how to handle vehicle emergencies.		
4.6	Proficient	Candidate will successfully explain how to park a vehicle in an emergency.		
4.7	Proficient	Candidate will demonstrate proficiency in the proper use of on-spot chains.		
4.8	Proficient	Candidate will demonstrate proficiency in the proper installation of snow chains on that particular vehicle.		
5.0	Driving Course Rules & Procedures (NFPA 1002)			
5.1	Master	Candidate will demonstrate proficiency in applications of rules and procedures during driving course exercises, with guidance. When training on a tractor drawn truck, the candidate must complete the driving course for the driver and tiller positions.		
5.2	Master	Candidate will demonstrate proficiency in the completion of the serpentine exercise.		
5.3	Master	Candidate will demonstrate proficiency in the completion of the alley dock exercise.		
5.4	Master	Candidate will demonstrate proficiency in the completion of the opposite alley exercise.		
5.5	Master	Candidate will demonstrate proficiency in the completion of the turn around exercise.		
5.6	Master	Candidate will demonstrate proficiency in the completion of the diminishing clearance exercise.		
5.7	Master	Candidate will demonstrate proficiency in parallel parking of an emergency vehicle.		
5.8	Master	Candidate will successfully explain the purpose of the controlled braking exercise.		
6.0	Driving Experience			
6.1	Master	Candidate must complete a minimum of 12 hours driving time on public roadways (parking lot time does not count towards this requirement).		

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7.0	Engine Company Operations - Attack Engine			
7.1	Proficient	Candidate will successfully explain the operations of:		
		a) Positive Displacement Pumps.		
		b) Automatic Pressure Control Devices.		
		c) Priming methods and Devices.		
7.2	Master	Candidate will successfully identify all pump panel and control components including the auxillary cooler and circulating valves.		
7.3	Proficient	Candidate will demonstrate knowledge of all nozzles carried on the apparatus:		
		a) Size and type.		
		b) GPM Rating.		
		c) Nozzle pressure required.		
7.4	Master	Candidate demonstrate proficiency in the ability to calculate the nozzle reaction for a given fire stream.		
7.5	Master	Candidate will demonstrate proficiency in the ability to place the initial attack line in service off of the apparatus tank water.		
		a) Proper apparatus position.		
		b) Placing the pump in gear.		
		c) Supplying an attack line – minimum 1 ½" @ 100GPM		
7.6	Master	Candidate will demonstrate proficiency in initiating a water supply, positioning the apparatus, and pumping attack lines.		
7.7	Master	Candidate will demonstrate proficiency in layout procedures.		
		a) Straight		
		b) Split		
		c) Reverse		
		d) Laying multiple lines		
		e) Layout using LDH		
7.8	Master	Candidate will demonstrate proficiency in the ability to change from on-board water tank to supply source while continuing to pump the attack line.		
7.9	Master	Candidate will demonstrate proficiency in the ability to change from apparatus water tank to hydrant after sleeving the hydrant while continuing to pump the attack line.		

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7.10	Master	Candidate will demonstrate proficiency in how to expand the water supply of the attack engine.		
		a) Hand lay line back to supply engine.		
		b) Have supply engine reverse lay from attack engine.		
7.11	Proficient	Candidate will demonstrate proficiency in the ability to pull a back-up line for the next engine company.		
7.12	Master	Candidate will demonstrate proficiency in the ability to place a leader line in service.		
7.13	Proficient	Candidate will demonstrate proficiency in the proper use of relief valves or pressure governors.		
7.14	Proficient	Candidate will demonstrate proficiency in the ability to pump a FDC at the correct pressures for a given floor for an Automatic Sprinkler and a Standpipe system.		
		a) Reverse lay from connection.		
		b) Hand lay to the connection.		
		c) Pump both sides of the connection.		
7.15	Proficient	Candidate will demonstrate proficiency in the ability to pump a FDC if the connection is damaged or not accessible.		
7.16	Proficient	Candidate will demonstrate proficiency in the ability to operate the apparatus mounted foam system.		
		a) Set proper foam proportion.		
		b) Know capabilities and limitations of foam system.		
		c) Know how much water is needed to make finished foam at 3% and 6% given the onboard foam tank size.		
		d) Knowledge of type of foam carried on the apparatus.		
7.17	Competent	Candidate will demonstrate proficiency in the ability to flush the onboard foam system and make the system ready.		
7.18	Competent	Candidate will successfully explain the operating procedures and differences in foam eductors:		
		a) In-line eductor.		
		b) Around-the-pump eductor.		
7.19	Competent	Candidate will demonstrate proficiency in the ability to use the portable foam inductor.		
8.0	Elevated Master Streams			
8.1	Proficient	Candidate will demonstrate proficiency in the ability to set up the supply lines to pump and elevated master stream.		
8.2	Proficient	Candidate will know the formulas to pump an elevated master stream.		

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8.3	Master	Candidate will demonstrate proficiency in the ability to place one line in service and then charge the second line.		
8.4	Proficient	Candidate will demonstrate proficiency in pumping a flying standpipe.		
9.0	Engine Company Operations – Water Supply			
9.1	Proficient	Candidate will demonstrate proficiency in the ability to supply another engine company.		
		a) From a hydrant with a Humat Valve connected.		
		b) From a hydrant with a Humat Valve not connected.		
		c) From a hydrant with multiple supply lines.		
		d) From an obstructed hydrant.		
		e) From a hydrant with LDH.		
9.2	Proficient	Candidate will demonstrate proficiency in the ability to determine the available water from a hydrant.		
9.3	Proficient	Candidate will demonstrate proficiency in both Tandem and Dual Pumping operations.		
9.4	Competent	Candidate will demonstrate proficiency in spotting the hydrant with the soft sleeve:		
		a) Left Side		
		b) Right Side		
		c) Front		
		d) Side Steamer connection.		
10.0	Rural Water Supply			
10.1	Proficient	Candidate will demonstrate proficiency in the knowledge of the rural water supply policy.		
10.2	Master	Candidate will demonstrate knowledge of types of rural water supply sources.		
10.3	Proficient	Candidate will demonstrate proficiency in proper drafting technique and pumping to an attack or relay engine.		
		a) Positions apparatus appropriately.		
		b) Operate from static water source (stream or pond).		
		c) Operate from folding tank.		
		d) Operate from multiple folding tanks.		
10.4	Proficient	Candidate will demonstrate proficiency in how to hook up to a dry hydrant.		
10.5	Proficient	Candidate will demonstrate proper setup of supply lines for fill site operations.		

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11.0	CAFS Operations			
11.1	Master	Candidate will explain the controls and pump panel indicators on the Hale CAFS Pump.		
11.2	Proficient	Candidate will describe the operation of the Pump gear box.		
		a) Candidate will describe basic maintenance of the pump gear box including the oil types and quantities.		
		b) Candidate will explain the procedure to use during emergency operations and how to pump through the Q max pump.		
11.3	Competent	Candidate will describe the Q max pump packings and maintenance items associated with these packings.		
11.4	Proficient	Candidate will describe the operation of the Total Pressure Master Relief Valve.		
		a) Candidate will demonstrate the operation of the TPM (total pressure master relief valve)		
		b) Candidate will explain maintenance items for the TPM valve		
		c) Candidate will explain why the TPM valve should be reset to "0" after each use		
11.5	Proficient	Candidate will describe the operation of the Master intake valve		
		a) Candidate will briefly describe how the master intake valve is designed and its operations.		
11.6	Proficient	Candidate will describe the Hale Thermal Relief Valve and how it operates		
		a) Candidate will identify backup components which indicate the thermal relief valve has operated		
11.7	Proficient	Candidate will explain the operation of the Environmentally Sensitive Primer on the Q Max pump		
		a) Candidate will describe the difference in the operation of the ESP primer versus the conventional rotary primers		
		b) Candidate will explain what type of primer is on the unit.		
11.8	Master	Candidate will explain the function of the 4-way priming valve and demonstrate its use		
11.9	Proficient	Candidate will explain the Foam Logix proportioner and the type of gears that drive it.		
11.10	Proficient	Candidate will describe the pump air compressor and identify it on the pump		
		a) Candidate will explain how the water/oil heat exchanger operates and its purpose		
		b) Candidate will locate the water/oil heat exchanger strainer and explain how often this item should be checked		
		c) Candidate will explain the range the air compressor can produce		

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11.11	Master	Candidate will identify and explain how often the following maintenance items should be checked:		
		a) water from the air/oil separator and filters		
		b) inline foam concentrate strainers		
		c) water/oil heat exchange strainer		
		d) air compressor air filter		
11.12	Proficient	Candidate will demonstrate the operation of the Foamlogix Concentrate Injection Control		
		a) on/off button location and operation		
		b) informational button location and operation and what information can be obtained from the screen		
		c) function of the up and down arrow keys and the optimal operating ranges.		
		d) the function of the bar graph		
11.13	Proficient	e) how to "0" the foam injection system		
		Candidate will explain the CAFS Pro Controller.		
		a) describe how the on/off button operates		
		b) explain what ranges the air compressor can operate in		
		c) identify the following items from the informational control items on the CAFS Pro Controller and the function of each		
		1) air flow		
		2) air/water ratio		
		3) compressor temperature		
11.14	Master	4) hours clock		
		Candidate will describe how to go from a wet to dry foam solution.		
11.15	Proficient	Candidate will describe limitations to CAFS operations.		
11.16	Master	Candidate will explain the 4 situations where CAFS cannot be used		
11.17	Master	Candidate will explain what slug flow is and how to prevent it		
11.18	Master	Candidate will explain what chatter is and how to prevent it		
12.0	Policy and Procedures			
12.1	Proficient	Candidate will review Metro Policy #24-06.		
12.2	Master	Candidate will review Structural Firefighting Policy #24-07.		
12.3	Proficient	Candidate will review Gas Leak Policy #25-07.		

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12.4	Proficient	Candidate will review Trench Rescue Policy Executive Regulation #65-89.		
12.5	Proficient	Candidate will review PIC Policy #24-04.		
12.6	Proficient	Candidate will review Vehicle Collision Reporting Policy #605.		
13.0	WMATA Water Supply			
13.1	Proficient	Candidate will successfully identify a WMATA standpipe and sprinkler FDC.		
13.2	Proficient	Candidate will successfully explain pertinent information contained on the WMATA FDC.		
13.3	Proficient	Candidate will demonstrate proficiency in the proper sequence for supplying the WMATA FDC for tunnel operations.		
13.4	Proficient	Candidate will successfully identify which systems in the WMATA system are wet or dry.		
13.5	Proficient	Candidate will successfully explain the duties and responsibilities for a water supply engine at an emergency exit shaft.		
14.0	Tools & Equipment			
14.1	Master	Candidate will demonstrate proficiency in the operation of all power tools carried on the engine.		
15.0	Atmospheric Monitoring Equipment			
15.1	Proficient	Candidate will demonstrate proficiency in the operation of atmospheric monitoring devices.		
		a) Gas Trac		
		b) CO Meter		
16.0	Electrical Systems & Components			
16.1	Proficient	Candidate will demonstrate proficiency in the knowledge and use of the following electrical components (as applicable):		
16.2	Proficient	Onboard Generator		
		a) Capacity		
		b) Operation		
16.3	Proficient	All Portable Generators		
		a) Capacity		
		b) Operation		
		c) Fuel		
16.4	Proficient	Flood Lights		
16.5	Proficient	Portable Lights		
16.6	Proficient	Fans		
16.7	Proficient	Reels		

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16.8	Proficient	Candidate will demonstrate proficiency in the knowledge and location of the panel box(s).		
17.0	Apparatus Positioning			
17.1	Proficient	Candidate will successfully explain the factors to consider when positioning this type of apparatus on the following incidents:		
		a) EMS Incident		
		b) Vehicle Collision		
		c) Trench Collapse		
		d) Single Family Dwelling Fire		
		e) Hazardous Materials Incident		
		f) Commercial Building Fire		
18.0	Apparatus Inventory			
	Master	Candidate will demonstrate knowledge of apparatus inventory.		